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ABSTRACT

The Multiple-Strategies Model offers teachers eight instructional prescriptions, which when allied with an appropriate strategy, can lead to effective teaching. The presecriptive elements are generic in nature and, therefore, can be used successfully in virtually any instructional setting. The eight instructional prescriptions include: set, opener, instructional objectives, justification, content, review, evaluation, and management. A ninth component, strategy, represents procedures for instruction selected from three or more teaching techniques appropriate to the needs of the teacher being trained, i.e., large or small group instruction, direct instruction, student team learning, individualized instruction, etc. This paper presents a brief explanation of each component of the model. (JD)

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THE MULTIPLE-STRATEGIES MODEL FOR EFFECTIVE TEACHING: BRIDGING THE GAP BETWEEN INSERVICE TRAINING AND CLASSROOM PRACTICE

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THE MULTIPLE-STRATEGIES MODEL FOR EFFECTIVE TEACHING: BRIDGING THE GAP BETWEEN INSERVICE TRAINING AND CLASSROOM PRACTICE

Experience has shown that most teachers are genuinely interested in offering effective instruction. Nonetheless, they tend not to respond to innovations which they believe to be contrived or out of touch with classroom realities. They especially are critical of any plan that would reshape their personalities or diminish their control over classroom curricula.

The Multiple-Strategies Model offers teachers a practical framework upon which to build effective instruction. Although prescriptive, this research-based model encourages the retention of personal uniqueness and the assertion of classroom-level control of curriculum. Most importantly of all, studies indicate that teachers instructed in the proper applications of the Model make genuine use of it in their classrooms.

Like the success of a building project, effective instruction depends upon careful planning, appropriate selection of materials, designation of specialized procedures and skill in the technique of putting everything together. The Multiple-Strategies Model offers teachers eight instructional prescriptions, which when allied with an appropriate strategy, can lead to effective teaching. The prescriptive elements are generic in nature and, therefore, can be used successfully in virtually any instructional setting. By variably organizing, modifying, and emphasizing these elements, teachers have considerable latitude for making effective instruction interesting and fun.

The eight instructional prescriptions include: set, opener, instructional objectives, justification, content, review, evaluation and management. A ninth component, strategy, represents procedures for instruction selected from three or more teaching techniques appropriate to the needs of the teacher being trained, i.e., large or small group instruction, direct instruction, Student Team Learning, individualized instruction, etc.

In the following pages is presented a brief explanation of each component of the Model. More elaborative discussions are presented in the training program for the Model and in materials being prepared for publication.

Set

In the Multiple-Strategies Model, "set" refers to the total classroom environment, the sum of a consciously created environment and its often unintentional affective and physical dimensions. Such set is always present in a classroom, but whether it aids or detracts from effective teaching is in part a function of the nature of the set. The Multiple-Strategies Model and current research support the promotion of a positive, caring, and humane classroom environment.

We believe students function best in classrooms with teachers who enjoy working with students, who care about student needs, and who empathize with student problems. Moreover, teachers should display genuine enthusiasm for their subject and offer students the opportunity to share in this enthusiasm. Students have a natural inclination toward solving problems in which they have genuine interest. A teacher's personal interest and enthusiasm can do much to promote similar attitudes in students.

The Multiple-Strategies Model promotes the notion that set must be honest and consistent. A positive set is not established when a teacher opens a lesson on a friendly note only to move to an antagonistic or competitive environment. Rather, it is important to establish a positive set at the first encounter with students. This might be done at the door to the classroom or in the hallway as classes are changing. Here it is important to be friendly, to display genuine interest and to be enthusiastic about the events soon to begin with those students entering the classroom. These positive attitudes must be maintained throughout the lesson, promoting positive teacher-student relations during class and sustaining them through dismissal.

Teachers must understand that in teaching, students tend to reflect the affective dimensions they sense in their teachers. Therefore, if teachers want their students to care about others and to be enthusiastic about learning, they must exhibit these attitudes in their own classroom behavior.

It is not our intent, however, to encourage teachers toward frivolous behavior. We believe that effective teachers are not only friendly and caring, but businesslike. They define their tasks and stick to them.

As in the business world, the ideal boss is one who is not only competent to get the job done, but who also cares about those who work under his/her direction. We believe many of these same attributes are appropriate to classroom teaching.

Finally, a word about maintaining set under less than wholly positive circumstances. Consider a situation in which a student has misbehaved. How does the teacher maintain a positive set? We suggest avoiding the demission of positive set through use of Assertive Discipline (Canter, 1986) or other management techniques which allow the teacher to carry on a lesson with minimal interference. Stopping a class to verbally discipline a student interferes with the flow of instruction and may destroy a positive set. We advocate maintenance of the positive set in all but the most uncommon circumstances.

Opener

Maintaining student interest from the beginning of the lesson is a goal for which most teachers strive. One way of focusing student attention immediately and generating interest in the lesson is through the use of a motivational tool or "opener". An opener is a concrete object that is used to introduce a new concept at the beginning of the class. It serves as a starting point from which students draw

relationships between the concrete object and the topic of the day. It also serves as a way of capitalizing on students' curiosity and observation skills. The concept of opener is illustrated in the following example:

> The teacher's instructional objectives for the day focus on the Addition Principle of Equality. As a motivator, she produces a football and asks students how many of them are fans, have attended a college or professional game, or enjoy watching football on television. After a brief discussion, she explains that the construction of a football field requires a firm understanding of certain mathematical principles by the architects, engineers and construction workers involved in planning and constructing the field. She then explains how the Addition Property of Equality is vital for accuracy in construction and engineering.

The value of using concrete objects in teaching has been accepted as valid educational practice. Particularly in areas of study that are more abstract in nature, such as in mathematics, concrete objects can help students draw important relationships between mathematical concepts and their everyday uses. For example, when introducing a lesson on the characteristics of a circle, the teacher might focus the students' attention on a bicycle wheel. Such an object is familiar and interesting to most students, and ties in with the teacher's main objective; which is to introduce students to circles and their many uses. Similarly, in a science class, to illustrate the concept of static electricity, the teacher might blow up a balloon in front of the class, rub it briskly on a student's sweater and stick it to the wall. A lively discussion concerning why the balloon adheres to the wall surely would ensue.

Novelty is an important component of motivation. There is actually a part of the brain, known as Magoun's brain, that is stimulated by novelty. Unfortunately, studies of schools indicate that students are given few experiences that are novel in nature (Goodlad, 1984). In studies with middle-aged adults, Flanagan (1986) found that individuals most frequently remembered experiences which they found to be both involving

and interesting. It is our contention that openers have the ability to generate such interest and at the same time can serve as a motivating introduction to the lesson.

Instructional Objectives

We admonish aspiring teachers to begin the design of courses by first thinking about the cognitive content they would like to address in a final examination. Our intent is to emphasize the critical necessity of establishing clear cognitive purpose and direction every time teachers offer instruction to students. We believe such purpose and direction is best created through use of instructional objectives.

Teachers and students alike can benefit from proper use of instructional objectives. For teachers, objectives serve as guides to course content, as monitors of student progress, as directors of student evaluation, as suggestors of assignments and activities, and as conveyors of planning to students, administrators or other teachers. Students benefit from instructional objectives because they are told exactly what is expected of them, under what circumstances they are to demonstrate their understandings and the quantity of information for which they are responsible.

In the Multiple-Strategies Model, teachers are encouraged to have students read instructional objectives aloud before content is taught. In this way the instructional objectives become the purpose of the lesson, and students are alerted to the need to focus their attention on this particular learning task. The knowledge of what is to be learned provides students with confidence as well. They are more likely to believe themselves capable of learning when the specifics of the learning task are clear.

It is important to acknowledge that cognitive outcomes are not a teacher's sole objective. In fact, promotion of affective considerations are both appropriate and important in classrooms. Nonetheless, we believe that cognitive outcomes are best suited to quantitative measurement and should be the principal determiner of student grades.

Justification

As the decision maker in the classroom, it is the teacher's responsibility to justify the inclusion of any content s/he has decided to teach and, moreover, to be able to provide students with a defensible reason for its place in the curriculum. At some point every teacher has had the experience of having students ask, "Why do we have to know this?" or " Why is this important?" The effective teacher goes beyond justifying the inclusion of content with abstractions or pedantic rationales such as "You need to know this because it will be on the test" or "This will be important for the next mathematics course you will take." Rather, s/he is able to provide students with real-life uses for subject matter. The following is an illustration of a teacher's justification for studying line segments. He first focuses the attention of the class by using a set of blueprints as his opener. When he is satisfied the class is focused, he says.....

> ".....Knowledge of line segments is a necessary skill in drawing and understanding plans. Before any construction takes place, architects and engineers express their ideas on paper using line segments. These ideas serve as plans for constructing objects, e.g., homes, schools, classrooms, even the pencils or pens you use to write."

Student questions about the relevance of material is an important issue teachers should address. Such questions can be viewed as either threats to the teacher's authority or as opportunities for reflection i.e., "Why am I spending valuable class time on this information?" The teacher's ability to answer such a difficult question will assist him/her in making critical curricular decisions.

The inability of students to see applications beyond the classroom has been a growing concern within the field of education. The College Board (1985) expresses its concern in the area of mathematics:

> Students need to see mathematics applied to problems outside the classroom and how people in various careers use mathematics. No one can anticipate the particular applications that a student will need as an adult, but every student can be given practice in applying a variety of mathematical ideas and methods.....students need to learn not only how to use mathematical techniques but also how to recognize when they might be helpful. (p. 20-21)

In this vein Goodlad (1984) found that students fail to recognize relationships between facts and important concepts and how those connections might assist them in their futures. (p.237) In the Multiple-Strategies Model, teachers are required to consider why material is important for students to learn. Moreover, they must convince students that this information is of personal value to them.

Justifying the relevance of specific content can assist in other aspects of classroom life. Glasser (1986) points out that many classroom management problems stem from students' inability to draw relationships between the subject matter and their lives. He contends that if students can be convinced of the validity of the material, they will work hard and take more responsibility for their learning. We believe these findings and others support our contention that teachers need to consider justifying the learning of all material they designate.

Content

Selection of the content is possibly the most important decision a teacher makes. Considering the universe of possibilities, a teacher must choose those segments which are appropriate to the academic need of his/her students. Certainly, the teacher may turn to a number of sources for assistance in choosing content, but in the final analysis the classroom teacher makes the hard choices. S/he must choose not only the specific content, but must decide which aspects of the content will receive greater or lesser emphasis.

In many school settings, content is mandated. Nonetheless, a classroom teacher can exercise great influence over a seemingly fixed curriculum. By varying emphases within the content, selecting dissimilar teaching strategies, adjusting class schedules, or differentially weighing evaluations teachers reinforce their authority over content.

Although we avoid the temptation to prescribe content, we do encourage teachers to make content decisions with care. We suggest that content should be relevant to students' lives, appropriate to their projected future needs, compatible with their capabilities and reflective of the current thought of leading scholars in that field. It is important that the teacher not place inordinate emphasis on those elements of content in which their personal interests violate the criteria.

Strategies

Teaching models have historically been named for the particular strategy they promote, e.g. Role Playing, Jurisprudential, discovery.

As is suggested by its title, the Multiple-Strategies Model invites the selection of strategies appropriately tailored to a teacher's particular needs.

We believe strategies should reflect the personality and skill level of the teacher as well as meeting the needs of the students and the subject matter. Several researchers urge teachers to use a wide variety of teaching methods or strategies. It may be more realistic, however, to provide teachers with a limited but more effective repertoire that best suits their personalities, their students, the subject matter and the classroom situation. Classroom research substantiates that only one strategy, that of teacher lecture, dominates instruction and is used approximately 85 percent of the time (Goodlad, 1984). These authors tend to agree with Zahorik (1986) who suggests that teachers ought to use a few compatible strategies that reflect their own beliefs about the aims of education, the nature of students, and the acquisition of knowledge. For example, instruction and supervised practice in teaching using direct instruction or Student Team Learning (STL) can provide the opportunity to accommodate different learning styles and goals while being interesting and motivating to both teachers and students.

Review

The Multiple-Strategies Model promotes diagnostic review of material immediately following instruction and in summary form at the end of units. Review should be seen as an integral part of instruction. To review immediately after instruction can provide a useful formative assessment of student learning. We encourage random sampling of students, wherein, several students are asked to demonstrate their understanding of each instructional objective covered in each lesson. When students provide inaccurate information or demonstrate incomplete understanding,

teachers should direct the question to one or two other students. In most cases, teachers should require students to reveal the analytical processes they employ in arriving at specific answers, decisions or examples. In this way, teachers can more accurately diagnose strengths or deficiencies and, when necessary, offer appropriate remediation. We encourage teachers to return to students who offer inaccurate responses after the correct information has been found. This technique serves as motivation for many, but should never be used to embarrass or otherwise upset students.

Upon completion of a number of related lessons, we recommend a summative review. In this procedure, the teacher has students read and respond to all instructional objectives in turn. Although many of the same diagnostic and remedial benefits of formative review are present, the summative review provides additional opportunities for students to gain insight into the relationships among all instructional objectives. By emphasizing the instructional objective, its justification and its relationship to other objectives, we believe the student arrives at an enriched understanding which may prove to be of greater influential value and may have a longer cognitive life.

Finally, we encourage teachers to provide students with frequent opportunities to practice the skills they are reviewing. When manipulation of formulas are involved, students should be provided with numerous, nonthreatening opportunities to practice the expected skills. When essay or short answer writing is required, students should be given frequent invitations to write. The comfort condition which grows from such practice increases the likelihood that subsequent evaluations will not be flawed by the anxiety that can grow from procedures unfamiliar to students.

Evaluation

The Multiple-Strategies Model is primarily concerned with two forms of evaluation; teacher evaluation of student knowledge and teacher appraisal of personal success in designing and delivering instruction. Both forms are critical to effective teaching.

In our program, emphasis is placed on fair and accurate cognitive evaluation of students. We believe students seek success in school. When teachers properly use the techniques advanced in this model, students' opportunities for learning greatly increase. Therefore, it is imperative that they be provided opportunities to demonstrate that they have mastered the designated content. Moreover, we believe that students benefit from frequent testing. During formative stages of instruction, we encourage the use of announced quizzes. We discourage any use of "pop quizzes," believing that they are often improperly motivated and, at best, are meager cognitive measures.

That construction of tests is essential to proper measurement is beyond debate. To suggest that teachers spend long hours constructing tests is, likewise, undeniable. Yet we believe that valid, reliable tests can be conveniently developed from well-written criterion-referenced objectives. Moreover, if care is taken to write objectives which appeal to all levels of cognitive functioning, uncommonly demanding and thorough tests can be easily prepared. For example, a criterion-referenced objective might read:

> Based on material presented by the teacher, the eighth-grade science student will write an essay in which s/he distinguishes between two (2) unique features of the major groups of natural rocks.

The examination question would then read:

> Based on material presented by the teacher, write an essay in which you distinguish among two (2) unique features of the major groups of natural rocks.

Objective and evaluation items of this nature are too seldom seen. Many teachers are content to have students memorize lists and isolated facts. Few would be comfortable presenting questions which call upon skills as complex as those needed to satisfy the objective in our example. Nonetheless, most students taught under the Multiple-Strategies Model would have little difficulty with this item. Their knowledge and skills grow from knowing what they are to learn and by frequently practicing the skills associated with essay writing. We believe the thought process demanded of writers is distinct and often superior to the cognitive processes required for verbal communication. Our approach incorporates verbal and written skills in each stage of instruction.

Teacher evaluation of the success of each planned lesson is a means of maintaining quality control while reducing the amount of time required in planning. When teachers make evaluative comments on each lesson plan, they send messages to themselves several months in the future. When it is again time to teach that material, the teacher will not be required to reinvent the instructional wheel. Instead, a favorably evaluated lesson can be used again or revised for variety. On the other hand, a less favorable evaluation will certainly lead to revision. Across several years, teachers can build impressive personal libraries of objectives, procedures and supportive materials.

Classroom Management

Numerous reports have shown that teachers place discipline at the

head of their concerns about teaching. According to a National Education Association poll (1981), nine out of ten teachers stated that students' misbehavior interfered with their teaching and 25 percent said it interfered greatly. It seems safe to say that all teachers want their students to behave in ways they deem appropriate. All teachers, however, do not know how to teach such skills to their students.

Classroom management is a critical component of effective teaching and therefore, is an integral part of the Multiple-Strategies Model. It is the "glue" that allows the well-planned teacher to effectively teach by using the other components of the Model. By creating lessons that are objective based, that contain interesting learning activities with a high rate of student involvement, and have relevance to students, disruptions and chronic misbehavior are reduced. It requires that the teacher have a clear set of expectations for acceptable student behavior and classroom conditions which s/he has conveyed to students. Techniques such as focusing student attention, monitoring the classroom by walking and scanning with one's eyes, using nonverbal cues, and moving to the trouble spot in the classroom while continuing to teach are all examples of ways to increase on-task behavior. As a general rule, we advocate Assertive Discipline (Canter, 1976) or similar types of unobtrusive management techniques.

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